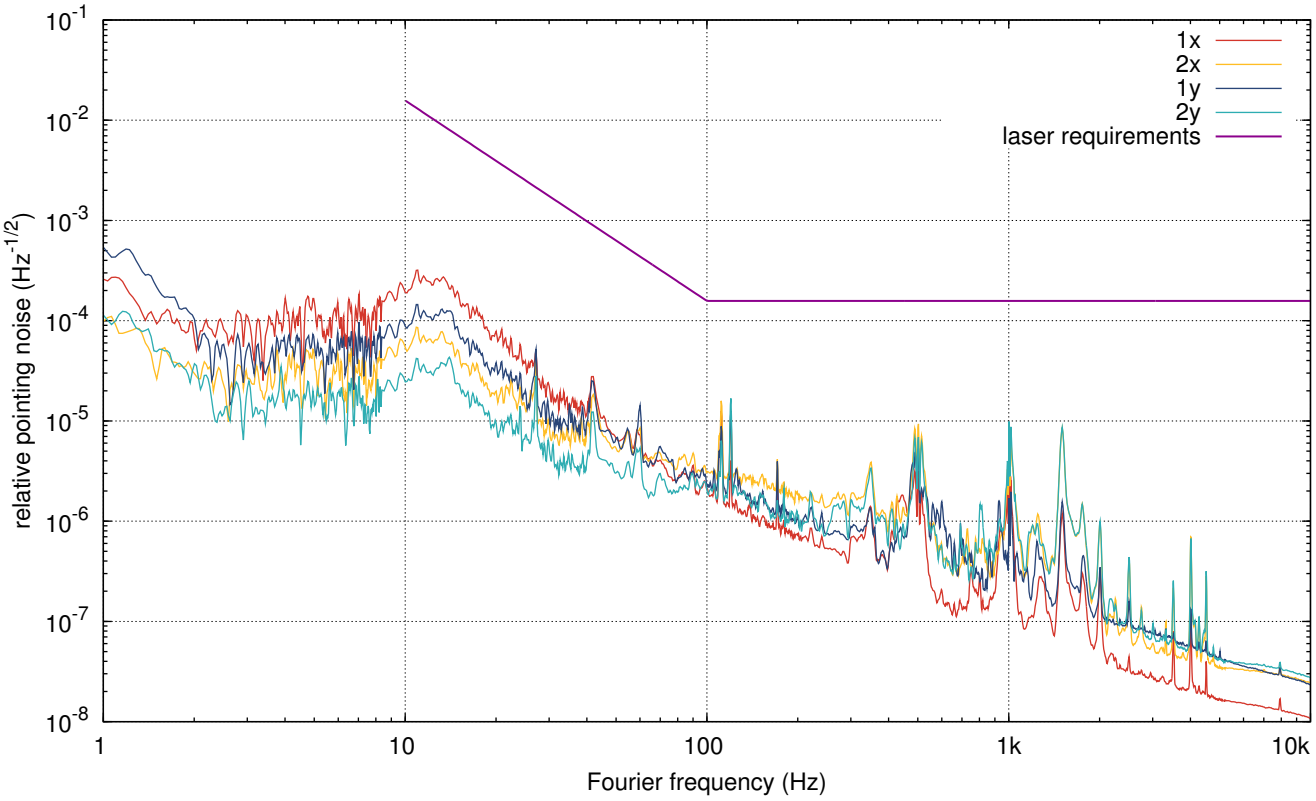
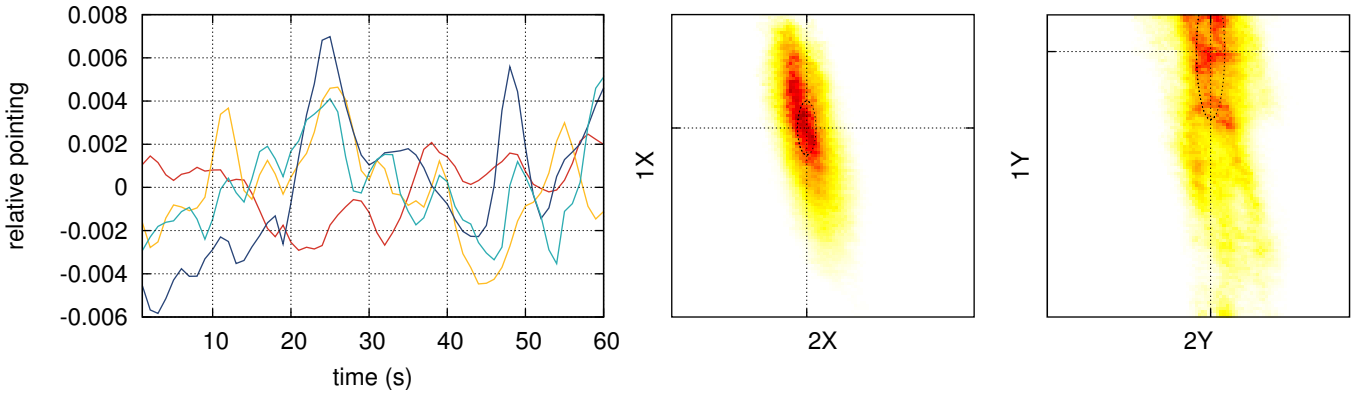
DBB – relative pointing noise

noisereport





D B B	
Diagnostic breadboard:	DBID 0308, lock mode (4)
Selected laser beam:	35W laser (DBB shutter open)
Power in DBB (RPD.DC):	9.1 V
PMC resonant:	100%
Beam alignment:	auto-alignment on
Modematching lens positions:	lens 1 (ML_1) = -2.0 mm, lens 2 (ML_2) = 4.8 mm, lenses not latched

P O I N T I N G	
Measurement:	60 s = 1.0 min, 29. Nov 2012 14:09 PST
Error signal:	1x = 0.001 $\mathrm{eps_{rms}}$, $-0.004 \ldots 0.003$ eps, 1y = 0.002 $\mathrm{eps_{rms}}$, $-0.008 \ldots 0.006$ eps, 2x = 0.000 $\mathrm{eps_{rms}}$, $-0.001 \ldots 0.002$ eps, 2y = 0.000 $\mathrm{eps_{rms}}$, $-0.001 \ldots 0.002$ eps
Error signal slope (1x, 1y, 2x, 2y):	6.67e-05 eps/cts, 9.64e-05 eps/cts, 1.08e-04 eps/cts, 9.56e-05 eps/cts
Error signal calibration age:	2.9 min, 2.4 min, 1.5 min, 0.8 min
Control signal:	1x = -0.039 ± 0.001 eps, 1y = -0.300 ± 0.003 eps, 2x = -0.174 ± 0.002 eps, 2y = -0.175 ± 0.002 eps

D A Q	
Measurement duration:	60 s = 1.0 min
Measurement start:	29. Nov 2012 14:09 PST (29. Nov 2012 22:09 UTC, 1038262198 GPS)
NDS:	h1nds1:8088 (v12r0)
User:	psl@operator2
Channels:	H1:PSL-DBB_QPD_1DX_CAL_OUT 65536 Hz, H1:PSL-DBB_QPD_1DY_CAL_OUT 65536 Hz, H1:PSL-DBB_QPD_2DX_CAL_OUT 65536 Hz, H1:PSL-DBB_QPD_2DY_CAL_OUT 65536 Hz, H1:PSL-DBB_CTRL_CTRL1X_EPS_OUTPUT 16 Hz, H1:PSL-DBB_CTRL_CTRL1Y_EPS_OUTPUT 16 Hz, H1:PSL-DBB_CTRL_CTRL2X_EPS_OUTPUT 16 Hz, H1:PSL-DBB_CTRL_CTRL2Y_EPS_OUTPUT 16 Hz, H1:PSL-DBB_SHUTTER 16 Hz, H1:PSL-DBB_DBID 16 Hz, H1:PSL-DBB_MON_SHUTTER_CLOSED 16 Hz, H1:PSL-DBB_MODE_NUM 16 Hz, H1:PSL-DBB_RPD_DC_OUTPUT 16 Hz, H1:PSL-DBB_CTRL_DSWITCH_ON 16 Hz, H1:PSL-DBB_LENS1 16 Hz, H1:PSL-DBB_LENS2 16 Hz, H1:PSL-DBB_LENS_LATCH 16 Hz, H1:PSL-DBB_CTRL_RESONANT 16 Hz, H1:PSL-DBB_QPD_MCALI_AGE_1X 16 Hz, H1:PSL-DBB_QPD_MCALI_AGE_1Y 16 Hz, H1:PSL-DBB_QPD_MCALI_AGE_2X 16 Hz, H1:PSL-DBB_QPD_MCALI_AGE_2Y 16 Hz, H1:PSL-DBB_QPD_MCALI_FACTOR_1X 16 Hz, H1:PSL-DBB_QPD_MCALI_FACTOR_1Y 16 Hz, H1:PSL-DBB_QPD_MCALI_FACTOR_2X 16 Hz, H1:PSL-DBB_QPD_MCALI_FACTOR_2Y 16 Hz
Raw data:	rawdata.zip (attached to this .pdf file, use Adobe Reader)
Calibration:	default.cali (embedded), 01. Jan 1970 00:00 UTC
Report source files:	report.zip (attached to this .pdf file, use Adobe Reader)
Program:	dbb_pnt.py v0.6, Patrick Kwee, patrick.kwee@aei.mpg.de

I N F O
Measurement method: The beam pointing fluctuations are measured with the differential wavefront sensing method. The fundamental mode of the DBB PMC is used as beam pointing reference. Shift and tilt of the beam are normalized with the beam waist radius and the beam divergence angle. Detailed information about the measurement method and instructions for performing this measurement are available in Kwee et al., Appl. Opt., 47(32):6022–6032, 2008; LIGO-T0900133; LIGO-T0900579.
no comment